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**United States Patent** [19]

Liu et al.

[11] **Patent Number:** 5,872,229[45] **Date of Patent:** Feb. 16, 1999**[54] PROCESS FOR 6-O-ALKYLATION OF  
ERYTHROMYCIN DERIVATIVES**

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[51] **Int. Cl.<sup>6</sup>** ..... C07H 1/00

[52] **U.S. Cl.** ..... 536/18.6; 536/7.2; 536/7.3;  
536/7.4; 536/18.5

[58] **Field of Search** ..... 536/7.2, 7.3, 7.4,  
536/18.5, 18.6

**[56] References Cited****U.S. PATENT DOCUMENTS**

4,672,109 6/1987 Watanabe et al. .... 536/7.2  
4,990,602 2/1991 Morimoto et al. .... 536/7.4

**FOREIGN PATENT DOCUMENTS**

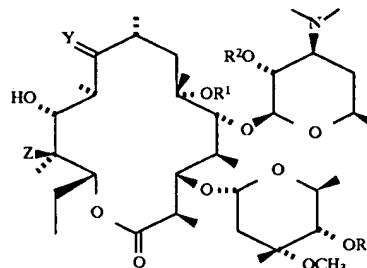
0260938 3/1988 European Pat. Off. .  
0272110 6/1988 European Pat. Off. .

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**[57] ABSTRACT**

A procedure for preparing 6-O-alkyl erythromycin compounds having the formula:



wherein R<sup>1</sup> is a loweralkyl group, R<sup>2</sup> and R<sup>3</sup> are independently hydrogen or a hydroxy-protecting group, except that R<sup>2</sup> and R<sup>3</sup> may not both be hydrogen simultaneously; Y is oxygen or a specifically substituted oxime; and Z is hydrogen, hydroxy or protected-hydroxy; by reaction of the compound wherein R<sup>1</sup> is hydrogen with an alkylating reagent, in the presence of a strong alkali metal base and also in the presence of a weak organic amine base, in a suitable stirred or agitated polar aprotic solvent, or a mixture of such polar aprotic solvents maintained at a reaction temperature and for a period of time sufficient to effect alkylation.

**7 Claims, No Drawings**